

# EXHIBIT 16



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# Transcript of Hearing

**Date:** March 22, 2023  
**Case:** Transcription Services

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Transcript of Hearing  
Conducted on March 22, 2023

1 (1 to 4)

2 HEARING OF THE  
3 SENATE COMMITTEE ON HEALTH, EDUCATION,  
4 LABOR, AND PENSIONS  
5 UNITED STATES SENATE  
6  
7  
8 STEPHANE BANCEL, MODERNA CEO  
9 Testifies on COVID 9 Vaccine Price Increase

SENATE COMMITTEE ON HEALTH, EDUCATION, LABOR,  
AND PENSIONS

SPEAKERS:

STEPHANE BANCEL, CEO, Moderna

CHRISTOPHER MORTEN, JD, PhD

MEET SARPATWARI, PhD, JD

CRAIG GARTHWAITE, PhD

Wednesday, March 22, 2023

20 Job No.: 5 86  
2 Pages: 8  
22 Transcribed by: Esther M. Taylor

1 THE CHAIR: The Senate Committee on  
2 Health, Education, Labor, and Pensions will come  
3 to order.

4 Let me begin by thanking Mr. Bancel,  
5 the CEO of Moderna, for being with us today and  
6 all other panelists who will be joining us.

7 Mr. Bancel very early on agreed to be  
8 here voluntarily, and I appreciate that very  
9 much.

10 I also want to take this opportunity,  
11 so there is no confusion, to congratulate  
12 Moderna, Pfizer, other companies, and the great  
13 scientists at the National Institute of Health  
14 and other Federal agencies for their  
15 extraordinary work in rapidly producing COVID  
16 vaccines that have saved millions of lives. We  
17 should be grateful to all those in Government  
18 and in the private sector who worked so hard to  
19 save lives.

20 This hearing, to my mind, is about  
21 several enormously important and interrelated  
22 issues that are on the minds of the American

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13 (49 to 52)

	49		5
1	doesn't, I lose it all.	1	salary of billions of dollars?
2	There are, right now, in our country,	2	MR. BANCEL: No, Senator.
3	hundreds of startup businesses trying to develop	3	SEN. ROMNEY: You're a billionaire
4	drugs that will cure diseases.	4	because the stock that you got when you started
5	I happen to know that because I	5	the company, you kept some of it, I presume.
6	invested in some in my prior life. I lost my	6	MR. BANCEL: Mm-hmm.
7	money in every single one. Studied them as well	7	SEN. ROMNEY: That stock is now worth
8	as we could. We lost our money. That's the	8	a lot of money because your technology has been
9	nature. But we thought, if it works, we're	9	proven to actually work.
10	going to really get a huge return for ourselves	10	Is it going to work beyond vaccines?
11	and for our investors.	11	And what kinds of things are you working on?
12	So, you know, I don't know how much	12	MR. BANCEL: So thank you, Senator.
13	money is the right amount of money, but the idea	13	So we are very excited because this
14	that somehow corporate greed has just been	14	is a platform that we worked on for 10 years.
15	invented in America is absurd. It's been there	15	We shared, just before Christmas, exciting data
16	from the beginning of free enterprise.	16	in cancer, which we are very excited because, of
17	Individuals investing, hoping that if it	17	course, all of us have been touched or are being
18	succeeds, they'll do very well financially,	18	touched right now by cancer. And we show
19	extraordinarily well. So I want to applaud the	19	44 percent reduction in recurrence of disease
20	example we have.	20	for melanoma cancer or deaths.
21	By the way, the socialist countries,	21	We are working very quickly to get
22	China and Russia and Northern Europe, did they	22	this to the FDA, in a Phase 3 study this year.
	50		52
1	come up with a vaccine that saved lives? No.	1	We are also working with our partners at Merck
2	No. They didn't.	2	to try this -- and we want to explore as many
3	Pfizer got technology from a German	3	tumor type as we can to see where can we help
4	company, free enterprise company -- Moderna --	4	people because if we -- if that result
5	and saved lives. It is a stark demonstration of	5	translates to other tumor type, which we believe
6	the comparison between free enterprise and	6	should happen, we have to be careful and, of
7	socialism. And free enterprise works and	7	course, wait for the clinical data -- that could
8	socialism doesn't when it comes to saving our	8	help a lot of people.
9	lives.	9	We are also working on rare genetic
10	Now, I look at the technology which	10	disease. One of the reason I got excited about
11	you're proposing to continue to develop in other	11	Moderna in the early days is, you know, I have
12	areas, and I guess I want to ask what are the	12	children and --
13	kinds of things that you're working on now?	13	THE CHAIR: I'm sorry,
14	What are the prospects that you believe for some	14	Senator Romney's speech on socialism took up the
15	of these to make a real difference in saving	15	bulk of the time. We have to go to
16	lives or improving lives? Is this a one-off	16	Senator Murray right now.
17	technology -- mRNA, is this something which is	17	SEN. ROMNEY: As did -- as did our
18	really just effective for vaccines or does it	18	Chairman.
19	have broader application? And what will you do	19	SEN. MURRAY: Thank you very much,
20	with the money that the company is making?	20	Mr. Chairman, for holding this hearing.
21	By the way, I noted that you're a	21	Mr. Bancel, welcome to the Committee.
22	billionaire now. Did the company pay you a	22	You know, I understand that shifting

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14 (53 to 56)

1 from a single Federal contract to a multi-  
2 layered payer market is adding complexity to  
3 your distribution claims. But we are talking  
4 about a vaccine that taxpayers invested  
5 \$12 billion in, a vaccine that was once \$15, and  
6 now you're planning, of course, to price it at  
7 \$130 despite the fact that it just costs about  
8 \$3 to make. And that -- as we know, that cost  
9 is going to get passed on to consumers whether  
10 it's through higher premiums or higher  
11 administration fees.

12 So I want to know what is your answer  
13 to this Committee and really to the public about  
14 the need for such a drastic quadrupling of the  
15 cost.

16 MR. BANCEL: Thank you, Senator, for  
17 the question.

18 So, first, just to precise some  
19 numbers. The U.S. Government invested  
20 \$1.7 billion in the vaccine development. The  
21 rest of the amount that you mentioned was  
22 actually purchase of product -- not investment

54 1 in the development.

2 As I said in my oral testimony, we  
3 decided -- and this was discussed at our Board.  
4 This was not asked of us by the Government.

5 We, in the letter I wrote to the  
6 Government, when we started discussing about  
7 procuring the vaccine in September of 2020, we  
8 proposed a discount. It was not asked of us.

9 We discussed with our Board and we  
10 said if the vaccine work -- in September 2020,  
11 we had no idea. The Phase 3 come in November,  
12 the data -- if the vaccine work, we think it's  
13 our responsibility to return the capital to tax  
14 payers. And we returned, as I mentioned,  
15 \$2.9 billion in discount versus the -- mRNA  
16 vaccine that the Government procured.

17 So despite our vaccine having three  
18 times more mRNA in it -- 100 microgram versus  
19 the other one was 30 microgram, we discounted  
20 our product to return \$2.9 billion to the U.S.  
21 taxpayer. We thought it was the right thing to  
22 do, to say thank you to the Government.

55 1 In addition, the Government got  
2 \$5 trillion of economic value, 18 million  
3 hospitalization less, impact on humans and the  
4 cost of it, and 3 million lives saved.

5 So in the endemic setting, the  
6 challenge that we have is -- as I mentioned in  
7 my opening testimony, the wastage we're going to  
8 have to take care of.

9 So, first, we have to make more  
10 product than we think we will sell because we  
11 cannot have patients going to pharmacies and  
12 having no supply. And this is a very hard  
13 business, very complex because it's a seasonal  
14 product.

15 The FDA currently plans to tell us  
16 they think late May/early June, what they want  
17 in the vial. We're going to spend the whole  
18 summer making as much as we can. And what we  
19 know is the forecast is going to be wrong. The  
20 forecast are always wrong.

21 And so the question to protect  
22 people, we need to make more than we think is

56 1 going to be needed. That waste, we're going to  
2 have to pay for it.

3 What happened in the fall of 2022,  
4 which I think is an important way to think about  
5 it -- the U.S. Government purchased 160 million  
6 doses. The last number I got from CDC, around  
7 50 million doses got in arms, but the Government  
8 bought everything. So the difference,  
9 110 million doses might go to waste, in the  
10 garbage.

11 So saying that the cost of the  
12 vaccine before was \$20, I don't think is the  
13 right way to do the cost. It's not the cost to  
14 the U.S. taxpayer. The U.S. taxpayer paid for  
15 everything. If you do the math, it's around  
16 \$80.

17 The cost in the fall of 22, still  
18 with five product in the vial.

19 SEN. MURRAY: Okay. Well, I  
20 understand that, and I just have a minute here  
21 left. I want to ask a couple of questions.

22 You are talking about having a

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20 (77 to 80)

<p>1 that are making a claim that you had a patent 2 infringement. I'm hearing that not only here, 3 but patent tweaking, patent infringements, when 4 it comes to where we spend even more money on 5 biologics and biosimilars.</p> <p>6 Point being, whether it's the 7 Government paying for it or the private sector, 8 it's a broken system and you need to get better 9 at it or you're going to get solutions in the 10 long run that you don't like.</p> <p>11 Your distribution system -- why is it 12 something that you sound like you gotta recreate 13 it? Where has it been up to this point? How do 14 you distribute your flu vaccines? Why do you 15 need this much money? A 400 percent price 16 increase is preposterous, especially when you've 17 been given all this Government largess and it's 18 even going to protect you from these lawsuits.</p> <p>19 What's the nature of your current 20 distribution system to where you can't just put 21 this into it, and why is this that much 22 different than what you've done for years in</p>	77	<p>1 contracts.</p> <p>2 During the pandemic, we only shipped 3 trucks to three warehouses in the U.S. when the 4 CDC was taking the responsibility and the cost 5 of getting the vaccine to hospitals, pharmacies 6 --</p> <p>7 SEN. BRAUN: Is Government requiring 8 you to do something different here that would 9 cause you to use a different network?</p> <p>10 What do McKesson and Cardinal and the 11 others do? There's a network to get this stuff 12 to pharmacies already and the places they need 13 to go. Why can't you blend it into that, keep 14 the cost down, be a little entrepreneurial in 15 what you're doing?</p> <p>16 MR. BANCEL: It's part of the 17 solution we're going to be doing, Senator, is 18 we're going to use existing networks, but we 19 have to set up everything because we never had a 20 commercial product before. We just have to go, 21 which we are doing right now, through all the 22 contracting, negotiating of all those rights and</p>	79
<p>1 distributing a flu vaccine? Because it looks 2 like we're headed more to where this is going to 3 be like the flu than it's going to be something 4 extra normal.</p> <p>5 MR. BANCEL: Thank you, Senator, for 6 your question.</p> <p>7 So just to clarify, we do not have a 8 flu vaccine on the market yet. We have one in 9 clinical study. We should have a Phase 3 data 10 soon and hopefully --</p> <p>11 SEN. BRAUN: You may not have one on 12 the market, but there's a distribution network 13 for them from your competitors. Why wouldn't 14 you be able to get into that? Why do you have 15 to justify creating a new distribution network? 16 No one would ever do that.</p> <p>17 MR. BANCEL: So indeed, Senator, we 18 are going to use, but we have to set up the 19 distribution network. I'm not saying that we 20 are going to build our own warehouses like other 21 companies do. We are going to work with 22 companies, but we have to set up those</p>	78	<p>1 so on to set up the distribution capability so 2 that we can get the vaccine to pharmacies.</p> <p>3 SEN. BRAUN: I've run out of time.</p> <p>4 You cannot, as well as the rest of the industry 5 including hospitals, have the best of both 6 worlds where you want Government to be in there 7 helping you when it's tough and where for the 8 private side, most of us are not happy with the 9 fact that we're lucky if your health insurance 10 plan only goes up 5 to 10 percent, which 11 incorporates hospitals, pharma, and maybe the 12 Darth Vader of it all, the insurance business.</p> <p>13 Something's got to give or you're 14 going to get more Government involved in 15 healthcare. Thank you.</p> <p>16 THE CHAIR: Senator Hickenlooper.</p> <p>17 SEN. HICKENLOOPER: Thank you, 18 Mr. Chair.</p> <p>19 Mr. Bancel, thank you for coming in 20 and testifying before us.</p> <p>21 It really is a remarkable, if you 22 look at the arc of what happened and you look at</p>	80

## Transcript of Hearing

21 (81 to 84)

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<p>1 it-- actually take it all the way back to when  2 Moderna was founded in 2010 and you came on  3 board in 2011. I look at so many moments of  4 risk and how many times -- I don't want to alarm  5 anyone, but the company could be at risk when  6 your margins were so thin, you didn't have  7 sufficient money to invest.</p> <p>8 And I think the notion of what the  9 Federal Government did during a time of crisis  10 where we made, I think, the decision baked in  11 wisdom to pursue six different solutions. I'm  12 talking about multiple working hypotheses.</p> <p>13 And in your case, the Federal  14 Government, BARDA, provided, I think, it was  15 \$1.7 billion in your statement, you said. And  16 that was money that really was after the earlier  17 investments, which were largely in research and  18 those are public-private partnerships that have  19 -- that money is invested. We do that --  20 Government does that in all different levels.</p> <p>21 In this case, the \$1.7 billion, you  22 actually turned 2.9 billion? 2.8?</p>	<p>8</p> <p>1 I believe Moderna would have got the  2 vaccine approved without the funding, but it  3 will not happen by the end of the year, so  4 Americans' lives would have been impacted by  5 that delay without the support.</p> <p>6 And so when we looked at it, we --  7 like, if we're going to get, you know, the  8 vaccine to work, we should provide a discount.  9 And the Board decided in five minutes and that's  10 what I put in my letter that I sent to the  11 Government in our first discussions for  12 procurement.</p> <p>13 SEN. HICKENLOOPER: And I did an  14 interesting calculation to look at how many  15 lives were saved by accelerating that process  16 with that \$1.7 billion that was paid back almost  17 not quite double, but certainly more than just  18 paying it back.</p> <p>19 And I am sympathetic to some of the  20 issues as you look at pricing going forward that  21 this is something that has to be kept at a cold  22 temperature, you're going from one customer to</p>
<p>1 MR. BANCEL: 2.9 billion.</p> <p>2 SEN. HICKENLOOPER: \$2.9 billion.</p> <p>3 What was part of your motivation and that?</p> <p>4 MR. BANCEL: Thank you, Senator, for  5 the comments and for the question.</p> <p>6 It's actually quite simple. As we  7 were starting, so there were two moments during  8 the pandemic in partnership with the Government.  9 First, focus on the vaccine development and  10 accelerate it. That's what BARDA funding  11 provided.</p> <p>12 Then we started to discuss with the  13 Government toward the end of the summer 2020  14 about purchasing vaccine in case the FDA will  15 approve them. And as we started to have those  16 discussions, we started to discuss with our  17 Board. And it became very clear, like, a five-  18 minute discussion at a Board meeting, that we  19 had to find a way to give the money back to the  20 U.S. Government because we all felt very  21 grateful that thanks to that funding, we were  22 able to accelerate the vaccine.</p>	<p>82</p> <p>1 thousands of customers, you're looking at a  2 90 percent or 95 percent reduction in what  3 you're producing, so all your manufacturing is  4 going to have to be reconfigured.</p> <p>5 MR. BANCEL: Yes.</p> <p>6 SEN. HICKENLOOPER: You know, and I'm  7 not an expert in pharmaceuticals, so I can't  8 address that, but I think it is a complex issue  9 that we need to spend more time looking at and  10 in these kinds of public-private partnerships,  11 we want to get to the alignment of interest.</p> <p>12 And I guess my question is -- you can  13 comment on that, but I would also -- what do you  14 think, going forward, how can we do a better job  15 of creating these public-private partnerships so  16 that both sides feel they know exactly what  17 they're getting and what's -- you know that  18 there's an alignment of that self-interest.</p> <p>19 MR. BANCEL: Thank you, Senator.</p> <p>20 Actually, the way we think about the  21 price during the pandemic was actually a  22 discount. We are talking here today about an</p>

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46 (181 to 184)

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19 *Esther M Taylor*

20 ESTHER M. TAYLOR

21 October 19, 2023

22 (511186, Moderna, 3-22-2023)